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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/565,658

01/24/2006

Masahiko Kubota

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5506

5514 7590 10/15/2008  
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EXAMINER

DAHIMENE, MAHMOUD

ART UNIT

PAPER NUMBER

1792

MAIL DATE

DELIVERY MODE

10/15/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/565,658	<b>Applicant(s)</b> KUBOTA ET AL.	
	<b>Examiner</b> MAHMOUD DAHIMENE	<b>Art Unit</b> 1792	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 24 January 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                        |                                                                   |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>1/24/06, 12/18/06, 9/14/07, 12/12/07</u> .                    | 6) <input type="checkbox"/> Other: _____                          |



## DETAILED ACTION

### ***Claim Rejections - 35 USC § 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1, 2, 3, 7-9, are rejected under 35 U.S.C. 103(a) as being obvious over Kubota et al. (EP 1380422) in view of KAZUHIKO et al. (JP409183928A).

The applied reference has a common inventor and assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed

Art Unit: 1792

but not claimed in the reference was derived from the inventor of this application and is thus not an invention “by another”; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(l)(1) and § 706.02(l)(2).

Kubota et al. (EP 1380422) discloses a method of manufacturing a liquid discharge head comprising the steps of;

forming a solid layer (203) for forming a flow path on a substrate (201) on which an energy generating element (202) is arranged to generate energy that is used to discharge liquid; forming, on the substrate where the solid layer is mounted, a coating layer for coating the solid layer (204);

forming a discharge port (209) used to discharge a liquid, through a photolithographic process, in the coating layer formed on the solid layer; and

removing the solid layer to form a flow path that communicates with the energy element and the discharge port,

Art Unit: 1792

whereby a material used for the coating layer contains a cationically polymerizable chemical compound (paragraph 0042), cationic photopolymerization initiator (paragraph 0043) and

whereby a material of the solid layer that forms a boundary with a portion where the discharge port of the coating layer is formed contains a copolymer of methacrylic acid (abstract) and methacrylate ester (paragraph 0028), which must be present at all boundaries of the resulting material. Applicant's claimed range appears to overlap Kubota et al. (EP 1380422) disclosed ranges (abstract).

Ionizing radiations are used at different wavelengths (paragraph 0018)

It is noted Kubota et al. (EP 1380422) is silent about an inhibitor of cationic photopolymerization in the cationically polymerizable chemical compound.

KAZUHIKO teaches cationically polymerizable substance, including cationic photopolymerization initiator and optionally a polymerization inhibitor are conventionally used in curable composition (abstract).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the process of Kubota et al. (EP 1380422) to include a polymerization inhibitor for the cationically polymerizable substance because KAZUHIKO teaches cationically polymerizable substance, including cationic photopolymerization initiator and optionally a polymerization inhibitor are conventionally used in curable composition (abstract). The reference of KAZUHIKO is only relied on to teach cationically polymerizable substance, including cationic photopolymerization

Art Unit: 1792

initiator and optionally a polymerization inhibitor are conventionally used in curable composition, and not the composition itself.

One of ordinary skill in the art would have been motivated to add a polymerization inhibitor in order to control polymerization when less or no polymerization is desired.

***Claim Rejections - 35 USC § 103***

4. Claims 4-6, are rejected under 35 U.S.C. 103(a) as being obvious over Kubota et al. (EP 1380422) in view of KAZUHIKO et al. (JP409183928A) as applied to claims 1-3 above, and further in view of Goto (US 2003/0215743).

It is noted Kubota et al. (EP 1380422) and KAZUHIKO's abstract are silent about details of the said inhibitor as described in applicant's claims 4-6.

Goto teaches the photosensitive resin composition preferably contains a thermal polymerization inhibitor. Examples of the thermal polymerization inhibitor include aromatic hydroxy compounds such as hydroquinone, p-methoxy phenol, p-t-butyl catechol, 2,6-di-t-butyl-p-cresol, .beta.-naphthol, pyrogallol; quinones such as benzoquinone, p-toluquinone; **amines** such as naphthyl amine, pyridine, p-toluidine, phenothiazine; aluminum salt or ammonium salt of N-nitrosophenyl hydroxyl amine; chloranil, nitrobenzene, 4,4-thiobis(3-methyl-6-t-butylphenol), 2,2-methylenebis (4-methyl-6-t-butylphenol), and 2-mercaptobenzimidazole (paragraph 0139).

Art Unit: 1792

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the process of Kubota et al. (EP 1380422) to include any known polymerization inhibitor cited by Goto.

One of ordinary skill in the art would have been motivated to include a known polymerization inhibitor as described by Goto when the cationic polymerization is thermally activated.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MAHMOUD DAHIMENE whose telephone number is (571)272-2410. The examiner can normally be reached on week days from 8:00 AM. to 5:00 PM..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nadine Norton can be reached on (571) 272-1465. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Art Unit: 1792

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. D./  
Examiner, Art Unit 1792

/Binh X Tran/  
Primary Examiner, Art Unit 1792